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REVIEW

Technology assessment in practice and theory

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Technology assessment in practice and theory (Armin Grunwald, Routledge, 2019) offers a comprehensive view of a field that is over 50 years old that has long been celebrated and contested for the diversity of its approaches, proximity to policy makers and attempts to extend scholarly insights on technology beyond the walls of the academy. The book's 253 pages are primarily divided across seven chapters, including but not limited to an overview of the motivations for technology assessment (TA), an account of the history and activities of TA, two theoretical chapters, and applications of theoretical insights to TA practice.

Newcomers to TA as well as long-time practitioners will appreciate the several systematic guideposts that are found throughout the book and whose use-value is further increased by accessible tables and compelling figures. These shed valuable light onto TA practices, responsibilities and the guiding values of its institutions. For instance, the discussion of the motivations for TA covers traditional preoccupations with risks and consequences but also goes beyond them to include more complex and fundamental issues such as the power of visions in debates on technological emergence, the possibility of technocratic threats to democracy, and the dynamically changing interface between science and society (p. 14, Table 2.4).

Above all, the general model of technology assessment (p. 89, Figure 4.1) situates Grunwald's tripartite division of TA fields and approaches – TA in policy making, in public dialogue, and in the making of technology – in relation to the conceptual dimensions of anticipation, inclusion and complexity and in relation to the overriding cognitive interest of enhancing reflexivity. In several respects this richly-layered model, which is wrapped in a depiction of the demand for, and response of TA, is the heart of the book.

To its credit, the book does not shy away from making observations and taking up challenging questions that are easily overlooked or ignored in discussions of TA. For instance, we learn

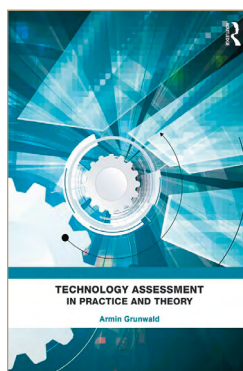
that “TA cannot be an assessment of technology” (p. 102); instead, the objects that TA assesses are “consequences” (p. 103). Furthermore, in laying out the importance for TA to balance social and epistemic robustness, the book also acknowledges potential incommensurability (p. 125) between social legitimation and epistemic quality. Questions such as “How can democratic decision-making do justice to scientific and engineering knowledge?” (p. 31) and “How can normative claims be realized when facing the challenges of complexity and accelerating dynamics?” (p. 31) move forward the book's clear and thoughtful dialogue, which often rewards the careful reader with answers to questions and objections that the reader may have formed a few pages earlier. TA's responsibility to navigate the tension between reflexivity enhancement and impact (p. 171) is appreciated. Especially

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admirable is the book's frank acknowledgement that TA can increase social and epistemic complexity (p. 98) via its commitment to inclusiveness, one of the key values that is threatened by autocratic state planning.

The book is not fully convincing in every respect, however. Its commitment to argumentative rationality (p. 9) may lead to an overly idealistic view: “really good arguments” may be stronger than “social perceptions and acceptance” (p. 128). This claim appears to be rather doubtful during the present post-truth era.

Additionally, the discussions of Responsible Research and Innovation (RRI) are not fully satisfying. For instance, although the book prominently identifies “enhancing reflexivity” as the chief cognitive interest of TA (p. 88), neither the meaning nor the recent use of this term by some of the “neighbors and relatives” (p. 83) of TA are discussed. There is no definition of the term and little resembling a discussion of how reflexivity differs across the tripartite TA landscape, of the relation between



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1st and 2nd order reflexivity (Schuurbiers 2011) or of the distinction between reflexivity and reflection (Stirling 2006). One wonders whether identifying reflexivity as the chief cognitive interest of TA would have emerged at this point in TA's history without a series of related developments that served as precursors to RRI. The book, however, does not discuss the development of a synergistic program of anticipation, engagement and integration by Anticipatory Governance (Barben et al. 2008) or the methodological innovations and empirical demonstrations of enhanced reflexivity that was achieved in collaboration with engineers (Fisher and Mahajan 2006) and later scientists (Schuurbiers 2011) by the Socio-Technical Integration Research (STIR) program. These demonstrations served as proof of concept both for Anticipatory Governance (Guston 2014) and RRI (Stilgoe et al. 2013).

Let me be clear: identifying reflexivity as the overarching cognitive interest of TA is a worthy conceptual innovation and accomplishment. It is only that the intellectual debt to RRI and its precursors is not acknowledged.

On the whole, these few critiques are overshadowed by the overwhelming practical and theoretical value of the book. TA is a dynamic and contested field of many actors, approaches, methods, self-understandings, and histories. Few could have undertaken an account of so much of the field or pulled it off in such an insightful and informative manner. *Technology Assessment in Practice and Theory* achieves its ambitious aim of providing an original, comprehensive, theoretically informed, practically applicable and forward-looking account of TA at international, regional and local levels. It is timely and will be a lasting resource for new TA researchers and seasoned practitioners alike, as well as a potent springboard for discussions of the future of TA. It helps show how and why TA is – and should continue to be – so much more than an assessment of technology.

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REZENSION

„Planungsethik“

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Albrecht Müllers Buch „Planungsethik. Eine Einführung für Raumplaner, Landschaftsplaner, Stadtplaner und Architekten“ schöpft aus den langjährigen Erfahrungen des Autors als Professor für Umweltinformation und Umweltethik sowie als ehemaliger Mitarbeiter der Akademie für Technikfolgenabschätzung des Landes Baden-Württemberg (AFTA). Ausgehend von dem zentralen Dreischritt „Analyse – Bewertung – Planung“ schlägt er den Bogen von grundlegenden ethischen Fragen, über umwelt- und wirtschaftsethische Aspekte hin zur Rolle der Bürgerbeteiligung und zur intergenerationellen Gerechtigkeit. Das Buch steht im Kontext einer interdisziplinären „Ethik in den Wissenschaften“, wie sie seit mehr als 25 Jahren im Internationalen Zentrum für Ethik in den Wissenschaften in Tübingen entwickelt wurde und wird (Ammicht-Quinn und Potthast 2015). Dieser Ansatz will ethische Problemstellungen ausgehend von den Sachargumenten erheben und bearbeiten und somit FachwissenschaftlerInnen dort abholen, wo ihnen ethisch relevante Fragen in Forschung und Praxis begegnen. Die „Planungsethik“ stellt hier einen beispielhaften und vorzüglichen Beitrag mit einsichtigen Kontroversen aus der planerischen Praxis dar.

Die Einführung verdeutlicht den LeserInnen, wie sie – oft implizit – genötigt sind, wertende oder normative Urteile vorzunehmen und dass das Wahrnehmen planerischer Verantwortung einen Rückzug hinter die „normative Kraft des Faktischen“ nicht erlaubt. Auch in der Technikfolgenabschätzung erweisen sich scheinbare Faktenfragen bei näherem Hinsehen zugleich als normativ-ethische Fragen. Sorgfältig konturiert Müller die ethischen Fragestellungen, die sich für Raum-, Landschafts- und StadtplanerInnen stellen, und eröffnet Lösungsperspektiven unter Rekurs auf u. a. John Rawls (Fragen der Gerechtigkeit), Martha Nussbaum (Fähigkeiten-Ansatz, siehe auch Hillerbrand et al. 2019), Amartya Sen (Fragen des guten und gelungenen Lebens) oder Elinor Ostrom (Prinzipien zur Gestaltung der eigenen Lebenswelt). Räumliche Planung soll Menschen in ihrem guten Leben befördern, nicht aber hinsichtlich ihrer Vorstellungen vom guten Leben bevormunden. Für die Beteiligung von BürgerInnen an Planungsverfahren erläutert Müller das Konzept der Planungszelle, wie es auch von der AFTA eingesetzt und weiterentwickelt wurde. Er warnt eindringlich vor Missbrauch und

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